

Application No. : 10/775,522

Responsive to an Office Action mailed March 31, 2006

Response filed June 30, 2006

REMARKS

After entry of this amendment, claims 1-15, 22-32, 34, and 38 are pending. Claims 12-15, 22-32, and 34 are withdrawn from consideration.

Amendments to the Claims

Claim 1 has been amended to recite that "the first load platform is fixed relative to the second load platform." Support for this amendment is found, for example, in the specification in ¶ [0033].

Claims 16-21, 33, and 35-37 have been canceled.

New claims 38-43 have been added.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-3 and 5-11 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,226,056 (Kikuchi). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Amended independent claim 1 recites in relevant part "the first load platform is fixed relative to the second load platform." The Examiner refers to lift pins 16 as a first load platform, and a heating means 51 as a second load platform. Even accepting for the sake of argument the Examiner's characterization, the apparatus of Kikuchi does not comprise a first load platform that is fixed relative to a second load platform. In particular, the "plurality of pins 16 are connected to and moved up and down by a lifting apparatus 15." Kikuchi at 8:1-3. Because Kikuchi does not disclose the recited feature, it does not anticipate claim 1 for at least this reason. Because claims 2, 3, and 5-11 are dependent on claim 1 and recite additional features, these claims are also not anticipated by Kikuchi for at least the same reason.

Claim Rejections Under 35 U.S.C. § 103

Claim 4 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Kikuchi. A *prima facie* rejection for obviousness requires: (1) a disclosure or suggestion of every element of the claim in the cited reference or references; (2) a suggestion or motivation to modify or combine the references; and (3) a reasonable expectation of success. The suggestion to combine and the

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reasonable expectation of success must be found in the prior art or known to one skilled in the art. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

As discussed above, Kikuchi does not disclose every element recited in claim 1. Kikuchi also does not suggest a first load platform that is fixed relative to a second load platform. Because claim 4 is dependent on claim 1 and recites additional features, Kikuchi also does not disclose or suggest every element of claim 4. Moreover, it would destroy the very purpose of Kikuchi's lift pins 16 to make them fixed relative to the second load platform identified by the Examiner as 51. Accordingly, claim 4 is not obvious over Kikuchi for at least this reason.

Prior Art Made of Record and Not Relied Upon

The Examiner describes FIG. 4 of U.S. Patent No. 6,641,672 (Nguyen) as illustrating "a first load platform 172 that is mounted to a portion of the bottom floor of the chamber and is located outside the perimeter of the second load platform 148." The specification refers uses reference number 172 to refer to a "shield support," which "separates the shield 150 from the workpiece 110 to allow removal of the shield 150." Nguyen at 5:27-29. The shield 150 "shields a portion of the workpiece 110 to prevent deposition at the workpiece edge and backside." Nguyen at 5:18-19. Nguyen also discloses a "workpiece support 130." Nguyen does not disclose that the shield support 172 is suitable for supporting a workpiece. Accordingly, the Examiner's characterization of the shield support as a "first load platform" appears to be incorrect.

The Examiner also refers to U.S. Patent Publication No. 2003/0075109 A1 (Arai) as illustrating "a first load platform 13 which are mounted onto the floor of the chamber (outside the perimeter of the second load platform) and are provided through the second load platform." Arai appears to illustrate conventional lift pins 13 fitted into throughbores in a susceptor 12. As illustrated in FIGS. 1 and 2, the lift pins 13 are not fixed relative to the susceptor.

Although Applicants continue to believe that the claims-as-filed are patentable over the cited references, claim 1 has been amended in the current response the interest of advancing prosecution.

New Claims

New claim 38 recites, in part, first and second means for supporting the substrate during processing. Support for new claim 38 is found in the specification, for example, in ¶ [0030] ("The support pins 110 are dimensioned to peripherally support a wafer 150 ...); ¶ [0035] ("In

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the illustrated embodiment, the support pins 210 and 210' are mounted on a slip ring 130, and together form an upper support platform substantially directly above a susceptor 220."); and ¶ [0036] ("FIG. 3A illustrates an embodiment 300 in which the upper load platform is a ring 310 that supports substantially the entire edge of the wafer 350."), as well as in the drawings. Structures corresponding to the first and second first and second means for supporting the substrate during processing are defined in the specification. In particular, the specification distinguishes the support means in the disclosed apparatus from the type of lift pins known in the art in ¶ [0026] ("Unlike conventional 'lift pins', the illustrated support pins 110 are positioned independently of the susceptor 120."). Consequently, Applicants submit that new claim 38 is allowable over the art of record.

New claim 39 recites that the first means of supporting the substrate during processing comprises at least one movable element. Examples include the embodiments illustrated in FIGS. 4A-4D.

New claim 40 recites that the first means of supporting the substrate during processing comprises a support ring. Examples include the embodiments illustrated in FIGS. 3A-3I.

New claim 41 recites that at least a portion of the first means of supporting the substrate during processing is mounted to a slip ring. Examples include the embodiments illustrated in FIGS. 1A-1D, 2A-2B, and 4A-4D.

New claim 42 is dependent on claim 41, and recites that at least a portion of the first means of supporting the substrate during processing is movable. Examples include the embodiments illustrated in FIGS. 2A-2B and 4A-4D.

New claim 43 recites that the second means of supporting the substrate during processing comprises a susceptor. Support for this claim is found in the specification, for example in ¶ [0047] ("In the illustrated embodiments, the first support platform is positioned substantially directly above the susceptor, with serves as the second load platform.").

Rejoinder of Withdrawn Claims Under M.P.E.P. 821.04

Because claim 1 allowable, Applicants request rejoinder of withdrawn claims 12-15, 22-32, 34 under M.P.E.P. 821.04, which provides:

[I]f applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims which depend from or

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otherwise include all the limitations of the allowable product claim will be rejoined.

Claim 1 is a product claim. Claims 12-34 are process claims which depend either directly or indirectly on claim 1.

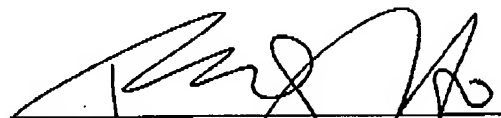
Applicants submit that this response addresses and overcomes all outstanding rejections in this case. If the Examiner believes that any remaining issues could be resolved in an Examiner's amendment, the Examiner is invited to contact the undersigned. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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